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THE PLANT DISEASE REPORTER

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BUREAU OF PLANT INDUSTRY

UNITED STATES DEPARTMENT OF AGRICULTURE

THE PLANT DISEASE REPORTER

Issued by

THE OFFICE OF MYCOLOGY AND DISEASE SURVEY

Volume XI August 1, 1927 Number 7

STINKING SMUT OF WHEAT (TILLETIA SPP.)

Reports on surveys for stinking smut have been received from Pennsylvania and Maryland.

Pennsylvania: Several of the counties having heaviest infection were not included in the survey and counties having lighter infection were included. Comparing county for county this year with last, stinking smut is probably considerably worse in the untreated fields this year. The average infection of 8.01 per cent will likely be about 1 per cent above the total loss for the state. High grade copper carbonate again appears to be a very effective control measure but the low grade is only moderately effective. The average of 1.63 per cent stinking smut in the fields treated with the low grade is probably several times too high for the state. Higher percentages of infected heads than ever before have been found in some wheat fields this year. A field in Lancaster County with 87 per cent of the heads infected is the worst smutted field I have ever observed. (Kirby, July 12)

Stinking Smut Survey in Pennsylvania by R. S. Kirby, 1927.

County	Untreated fields			Fields treated copper carbonate dust 50 per cent			20 per cent		
	No. fields	Percentage bunt: Average	Maximum	No. fields	Percentage bunt: Average	Maximum	No. fields	Percentage bunt: Average	Maximum
Berks	16	14.4	57	3	.11	.3	1	1	1
Bucks	15	3.8	19	-	-	-	-	-	-
Carbon	5	8.85	19.5	4	.05	.2	-	-	-
Columbia	10	9.48	76.5	10	.008	.05	-	-	-
Cumberland	9	11.03	33	2	trace	trace	6	.81	3.25
Dauphin	14	7.35	21.5	4	.0004	.001	2	.27	.3
Delaware	4	4.89	16.6	4	.2	.8	-	-	
Franklin	15	5.19	31.5	3	0	0	1	12	12

County	Untreated fields: No. fields	Untreated fields: Percentage bunt: Average	Untreated fields: Percentage bunt: Maximum	Fields treated copper carbonate dust 50 per cent: No. fields	50 per cent: Percentage bunt: Average	50 per cent: Percentage bunt: Maximum	20 per cent: No. fields	20 per cent: Percentage bunt: Average	20 per cent: Percentage bunt: Maximum
Lancaster	10	15.82	87	3	.06	.2	-	-	-
Lehigh	17	7.96	37	1	.0	0	1	.05	.05
Lycoming	4	20	32.5	8	.02	.1	-	-	-
Montgomery	18	4.4	25	-	-	-	-	-	-
Union	11	1.6	4.6	5	.2	1	1	1.1	1.1
York	12	7.72	45	6	.008	.05	-	-	-
Total and average	160	8.01	-	53	.036	-	12	1.63	-

Survey for Stinking Smut of Wheat in Maryland by R. A. Jehle and F. W. Oldenburg, 1927.

County	Untreated fields: No. of fields	Amount of smut: None	Trace	Less than 1%	More than 1%	Fields treated with copper carbonate dust: No. of fields	Amount of smut: None	Trace	Less than 1%	More than 1%
Prince George	6	4	-	-	2	3	2	1	-	-
Calvert	11	1	2	4	4	-	-	-	-	-
Montgomery	21	12	2	2	5	-	-	-	-	-
Howard	53	11	11	10	21	3	3	-	-	-
Carroll	79	11	15	9	44	19	11	5	1	2
Harford	29	10	11	3	5	-	-	-	-	-
Baltimore	9	2	3	-	4	6	3	3	-	-
Frederick	44	3	9	7	25	3	2	1	-	-
Washington	14	1	2	1	10	-	-	-	-	-
Allegany	11	2	1	3	5	-	-	-	-	-
Talbot	9	-	1	4	4	2	1	1	-	-
Queen Annes	17	4	3	-	10	3	-	-	2	1
Caroline	12	2	1	7	2	-	-	-	-	-
Dorchester	12	2	1	5	4	2	1	1	-	-
Kent	5	-	1	1	3	6	2	3	-	1
Cecil	8	1	1	3	3	4	2	-	1	1
Somerset	2	2	-	-	-	2	-	2	-	-
Total fields	342	68	64	59	151	53	27	17	4	5
Percent of fields	-	20%	19%	17%	44%	-	50%	32%	8%	10%

STEM RUST OF CEREALS

Pennsylvania: Stem rust on wheat was first observed near barberries in Cumberland County on June 14. It was observed in the same county at some distance from barberries on June 23, at which time the rust was apparently widely distributed throughout the southeastern part of Pennsylvania. It is more plentiful this year that I have observed for a number of years. (Kirby, July 12)

Ohio: Has been observed spreading from barberries in only one instance so far. Though the rust became severe on wheat near the barberry the epidemic was well confined to a few yards from the bush. We have with us again our annual sprinkling of rust in wheat fields all over Ohio. It appeared later than the rust on wheat near barberries but gained impetus as harvest time approached. The general sprinkling of stem rust on wheat was heavier for the state as a whole than it has been in the last eight years. Its source remains a matter of conjecture. Most of the wheat in the state escaped stem rust damage and the total loss will probably not exceed one per cent. To date stem rust on oats has been noted in many fields in southern and central Ohio but it is very light and the oats are ripening rapidly. Apparently we are not going to have any appreciable loss of oats this year on account of stem rust. (J. W. Baringer, July 15)

Illinois: Indications are that losses from stem rust will be very slight this year. A trace of infection has been found on wheat, rye, barley, and oats in nearly all the counties of northern Illinois, but in no case has the infection been reported as more than a mere trace. Harvest is in full swing in southern counties and will get under way in central and northern counties within a few days. (G. C. Curran, Cereal Courier 19: 207. July 10)

Wisconsin: Mild infection noted on wheat and barley in southwestern Wisconsin. There are considerable areas of escaped barberries in this section. (Vaughan, July 15)

Iowa: Barley unusually free. On oats in southwest Iowa a trace to 2 per cent, southern part a trace to 10 per cent, north and central Iowa a trace. A trace on rye. (Archer, June 27).

Infection on wheat extremely light. Many fields free while in others an occasional pustule may be found. In the south some fields show most of the plants with about 1 per cent infection. (Archer, July 15)

North Dakota: As yet no stem rust has been seen. (R. W. Smith, Cereal Courier 19: 213. July 10)

South Dakota: On wheat prevalent but doing only a little damage; probably 5 per cent or less. Some on oats but not severe; as crop is nearly mature it will do little damage. Probably not over 5 per cent on barley. (Evans, July 15)

Colorado: Present but not very much on wheat. (E. L. LeClerg, July 1)

LEAF RUST OF WHEAT (PUCCINIA TRITICINA)

Pennsylvania: Appeared earlier this spring than some years, first being found at State College June 1. Due to damp weather during May and the first half of June, this rust spread very rapidly and by the latter part of June, 80 to 100 per cent infection was common. The heavy infection caused premature death of both the upper and lower leaves of the plants which will certainly result in a marked reduction in yield. (Kirby, July 12)

Wisconsin: Very prevalent this year. Winter wheat in milk stage has leaves 75 to 100 per cent infected. (Vaughan, July 1)

Minnesota: Unusually severe. Susceptible varieties are practically defoliated. (Sect. Pl. Path.)

South Dakota: Very abundant. All leaves are well covered. Apparently no damage. (Evans, July 15)

Colorado: More prevalent this year than in the past five. Very heavy in eastern Colorado on winter wheat; also prevalent in the spring wheat area. (E. A. Lungren, Cereal Courier 19: 211. July 10)

REPORTS ON OTHER WHEAT DISEASES

Scab (Gibberella saubinetii)

Pennsylvania: Observed in many of the wheat fields surveyed, but due to more or less dry weather after the wheat came into flower, it is only slightly more severe than last year. (Kirby, July 12)

Illinois: There is a high percentage of wheat scab in the southern half of Illinois this season. Some fields are running as high as 30 per cent infection. Even in Turkey wheat, infection is running up as high as 10 per cent. The northern third of the state seems to have escaped pretty well, at least in sections which I have visited. (B. Koehler, July 5)

Iowa: The infection this season is extremely slight. In fact, it is absent in most cases. When scab does occur it is usually possible to find only an occasional head with a few infected kernels. (Archer, Aug. 1)

Anthracnose (Colletotrichum graminicolum), and Helminthosporium root rot

Pennsylvania: These diseases are the most destructive that I have observed since 1921. Working singly or in combination I have observed them to cause from 25 to 75 per cent reduction in some fields. These diseases are always most destructive where wheat is planted after wheat or after some other cereal or grass crop. (Kirby, July 12)

REPORTS ON OAT DISEASES

Smuts (Ustilago spp.)

Wisconsin: Very abundant in southern Wisconsin. (Vaughan, July 1)

Colorado: Loose smut very common and causing considerable damage this year. (E. L. LeClerg)

New Mexico: Loose smut is quite common in fields planted to untreated seed. (Crawford, July 1)

Crown rust (Puccinia coronata)

Minnesota: More prevalent this year than it has been for many years. It can be found on practically every plant in all oat fields. (Sect. Pl. Path., July 1)

South Dakota: Very abundant. (Evans, July 15)

ADDITIONAL REPORTS ON APPLE SCAB

Connecticut: On susceptible varieties especially where not sprayed scab is more conspicuous than last year. (E. M. Stoddard, July 15)

New York: (Reports from New York State Col. Agr. Dept. Pl. Path. & Entom. Weekly News Letter, July 25)
Nassau Co.: Scab is quite serious. (E. J. Hambleton)
Onondaga Co.: Scab infection on the fruit is quite severe in many orchards. (D. D. Ward)

Ontario Co.: Showing up more on the fruit all the time. (C. K. Bullock)
Orleans Co.: Continues to increase and has already affected much of the fruit. (R. G. Palmer)

Virginia: Quite severe in Piedmont and southwest. Has continued to spread during cool wet weather of early summer. Unsprayed trees of Winesap and Delicious at Crozet show practically all fruits infected. (Fromme, July 15)

Ohio: Much scab in Putnam County. Almost 100 per cent on trees examined. (W. G. Stover, July 15)

Wisconsin: By far the most striking disease of the season. Many trees are half defoliated now. Only those trees receiving a pre-pink or green tip spray give prospect of a clean crop. (Vaughan, July 1)

Minnesota: Apple scab, which was about two weeks late in getting started, is now more abundant and is doing more damage than at any time in the last three years. The Florence crab seems to be particularly susceptible. (Sect. Pl. Path., July 1)

South Dakota: Very prevalent and is doing much damage where spraying has not been resorted to. (Evans, July 15)

REPORTS ON OTHER APPLE DISEASES

Blotch (Phyllosticta solitaria)

Arkansas: Very common on unsprayed trees all over state on leaves, twigs, and fruits. (V. H. Young, July 15)

Rust (Gymnosporangium juniperi-virginianae)

Wisconsin: Present but not considered serious in southwestern Wisconsin. (Vaughan, July 1)

Minnesota: Very abundant locally, more so than at any time in the last three years. (Sect. Pl. Path., July 1)

Blight (Bacillus amylovorus)

Minnesota: Doing less damage now than at the same period last year. The cool weather has apparently kept it in check. (Sect. Pl. Path., July 1)

South Dakota: Rather prevalent and doing a great deal of damage in some orchards. (Evans, July 15)

SEVERE DAMAGE FROM PEAR BLIGHT IN VIRGINIA

"The severest damage by pear blight observed in the Winchester section in five years is in evidence this year. In an orchard of Seckel pears near this Laboratory approximately 75 per cent of the terminal growth in the top of the trees has been killed. Some of these trees appear as though the entire tops had been burned." (Schneiderhan, July 17)

GRAPE DISEASES IN ARKANSAS

"Downy mildew (Plasmopara viticola). More than has been noted for several years. Very abundant on foliage of most varieties except the Concord type."

"Black rot (Guignardia bidwellii). Very common all over state and causing much damage where spraying is not followed. Little in commercial vineyards as yet."

"Anthracnose (Sphaceloma ampelinum). Although first noted in 1926 appears to be scattered well over Southwestern and Central part of state. Causing considerable damage in many cases to fruit and canes." (V. H. Young, July 15).

PEACH DISEASES IN ARKANSAS

"Bacterial spot (Bacterium pruni). Still continues to cause defoliation in many orchards, although less than earlier. Foliage on many trees very thin as a result of shot hole."

"Brown rot (Sclerotinia fructicola). Very common all over state on unsprayed fruit. Large commercial orchards of Southwest and Central Arkansas show very little." (V. H. Young, July15)

TOMATO DISEASES IN OHIO

The following report on diseases found in Cleveland greenhouses was sent in by W. G. Stover, July 15.

"Leaf mold (Cladosporium fulvum). Very abundant in some Cleveland greenhouses although not yet very destructive. Crop about half picked. Very little seen in some houses. Some growers say, 'Take off the night engineer and close the ventilators,' and the disease will start. Say Bordeaux will not control it but care of the watering and ventilation will."

"Timber rot (Sclerotinia sclerotiorum). A number of plants in one greenhouse showed perhaps 5 per cent loss. Many fruits have been attacked and rotted. Very large black sclerotia are formed on these fruits later. Much 'drop' in the preceding lettuce crop."

"Mosaic very abundant in a number of Cleveland greenhouses, almost absent in others. Only slight damage in houses visited. No filiform leaf seen though it was reported in some nearby houses."

"Streak seen on relatively few plants in one greenhouse but reported as severe in others. Was seen outdoors at one place on several plants."

REPORTS ON LATE BLIGHT OF POTATO

Two additional reports on late blight have been received. E. J. Hambleton reported that it was observed July 9 in a field of Green Mountain potatoes from Maine seed near Wantaugh, Nassau County, New York. On June 24 Berg located late blight in a field near Reedsville, West Virginia. He states, "This early appearance is somewhat unusual in view of the fact that the potatoes were only planted on May 10."

TOBACCO DISEASES REPORTED FROM VIRGINIA AND GEORGIA

Virginia: Slight infection of blackfire (Bacterium angulatum) in a few fields in Halifax County. Weather conditions until recently unfavorable for spread as the late spring and early summer have been dry.

Ringspot (undet.) found in all fields of tobacco seen in Halifax county during week of July 17. Usually in slight amounts. None seen in Bedford or Campbell counties but only a few fields visited. (Fromme, July 15.)

Southern Georgia: Wilt (Bacterium solanacearum). On June 22, one field in Coffee County showed severe wilting of plants in low, damp areas. In most severely affected spots, plants were badly stunted. Very little root-knot was present. The field was in tomatoes last year, and has been in tobacco in years past. This is the first observance of this disease I have made in Georgia. Nearby tomato fields showed Bacterium solanacearum wilt.

Root-knot (Caconema radicicola (Groef) Cobb) is quite severe generally in the Coastal Plains area. The symptoms are now outstanding since the healthier plants made rapid growth following the break of the severe drought. The badly affected plants remain stunted, and are entering the wilting and leaf-burn stages. Damage from this cause promises to be greater than in 1926. The first cropping of leaves is just beginning. (O. C. Boyd, June 25.)

REPORTS ON BEAN DISEASES

Bacterial blight (Bacterium phaseoli)

Arkansas: Very common in central Arkansas on snap beans. (V. H. Young, July 15.)
Ohio: Rather common (J. D. Wilson, July 15.)
Wisconsin: Bad outbreak in Green Lake County. Variety Full Measure. Field exposed to sweep of wind. Much local rain. Wardwell Wax badly blighted in Columbia County. (R. E. Vaughan, July 15.)

Mosaic (undet.)

Wisconsin: Very little on canning beans as compared with last year. (R. E. Vaughan, July 15.)
Colorado: Widespread, causing considerable damage this year. Insects very common this spring. (July 15.)

CABBAGE YELLOWS IN WISCONSIN.

"More yellows in non-resistant strains at this date than for several years. First noted in seed bed June 24. Had probably been present for a week. Since June 15 there has been a period of high temperature." (R. E. Vaughan, July 15.)

ONION SMUT

Wisconsin: A larger percentage in formaldehyde treated fields than in any year since treatment began. Appears to be correlated with the heavy rains and unfavorable conditions at seeding time. (R. E. Vaughan, July 15.)

Colorado: Noticed in a few fields, not common. Will probably cause very little damage. (July 15. E. L. Le Clerg.)

ROOT ROTS OF PEAS

Aphanomyces euteiches in Wisconsin

"Not as serious as was thought it would be from earlier observations. Present in many fields and a factor to be considered in planning a rotation." (Vaughan, July 1).

Fusarium root rot

Maine: Several specimens have been sent in to date. (Folsom, July 1).

Iowa: A Fusarium root rot is causing considerable loss in home gardens in Storey County. (Archer, June).

Colorado: Causing some damage to field peas where present. General in pea growing sections. (E. L. LeClerg, July 1).

Rhizoctonia root rot in Montana

"One hundred per cent local infection of Nott's Excelsior near Bozeman, 90 per cent infection of World Record at Manhattan. Wilbur Brotherton estimated commercial damage of 50 per cent for the former and 25 to 50 per cent, depending upon the weather, for the latter. Disease very common. Damage usually slight. This has been an unusually wet season. Only traces shown in other fields inspected." (P. A. Young, July 1).

A NEW DISEASE OF WILLOWS APPEARS IN CONNECTICUT

On July 1, Clinton reported as follows:

"We have had called to our attention a serious trouble of willows in the northern part of the state. Early in June ornamental trees 2 to 3 feet in diameter showed the foliage largely killed, much as the anthracnose of sycamores and oaks this spring. At first it was thought to be the result of late frosts but with more study I am inclined to believe it to be due to a fungus that is present on the leaves and less so on the twigs, determined provisionally Fusicladium saliciperdum (Septogloeum saliciperdum)."

Since that time comparison of this fungus with European specimens of Fusicladium saliciperdum (All. & Tub.) Tub. has shown it to be the same. The fungus attacks the leaves and twigs of many species of willows

on the continent of Europe and in Great Britain, but has not hitherto been known to occur in this country. It should be watched for in other localities, and specimens and reports of suspected occurrence should be sent either to Dr. G. P. Clinton at the Agricultural Experiment Station, New Haven, Connecticut, or to the Plant Disease Survey.

A FEW OF THE RECENT SPECIMENS AND REPORTS ON DISEASES OF ORNAMENTALS

Aster - Fusarium wilt, at North, Virginia, traces in two fields on new land, asters never grown there before. Introduction probably through seed. (Haskell and McWhorter, June 29.)
Yellows at North, Virginia, three fields examined gave 5 per cent, 2 per cent, and trace respectively. Some plants showed the extreme type of dwarfting, while others were only partly affected. (Haskell and McWhorter, June 29).

Box - *Macrophoma candollei, *Nectria roussolliana and *Phoma sp., collected at Charleston, West Virginia. (G. Hamilton Martin and W. F. Craig, June 24).

Delphinium - *Bacterium delphinii at Salem, West Virginia, 50 per cent infection in a local planting. (Martin and Craig, June 22).
*Sclerotium root-rot, probably Sclerotium delphinii, Lexington, Kentucky. (Valleau, June 15).

Hollyhock - *Puccinia malvacearum, North Platte, Nebraska. First report of rust of this host from state. (Peltier, July 18).

Hydrangea - *Botrytis blight, Jefferson City, Missouri. (A. C. Burrill, June 10).

Iris - *Didymellina iridis. Parkersburg, West Virginia, also noted at Charleston, Huntington and Clarksburg. (Martin and Craig, June 23).

Peony - *Cladosporium paeoniae., Jane Low, Charleston, Parkersburg and Huntington, West Virginia. (Martin and Craig, June 22.)
Botrytis blight reported from Maine (Folsom), *D. C. (Weiss) *Virginia. (Haskell and Weiss), *West Virginia (Martin and Craig).

Rose - *Diaporthe umbrina and *Coniothyrium sp. found in West Virginia at Morgantown, Fairmont, Clarksburg, Parkersburg, Charleston, Huntington and Wheeling; the cause of a large amount of injury and loss . (Martin and Craig, June 29).
*Phomopsis sp., Salem and Charleston, West Virginia. (June 25.)

Sweet pea - *Mosaic. Barcroft, Virginia. On most of the plants in a 30 foot row, severe in two or three spots. (Wood, June 20).

* = Specimen received by Plant Disease Survey.